STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING

GRETCHEN WHITMER
GOVERNOR

LIESL EICHLER CLARK
DIRECTOR

July 29, 2022

VIA E-MAIL and U.S. MAIL

Jim Saric
Remedial Project Manager
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3511

Dear Jim Saric:

SUBJECT: Michigan Department of Environment, Great Lakes, and Energy (EGLE) Comments on the Fourth Five-Year Review (FYR) Report for the Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site (Site), Allegan and Kalamazoo County, Michigan.

EGLE has reviewed the Draft FYR Report prepared by the United States Environmental Protection Agency (US EPA), received June 8, 2022. EGLE offers the following comments and recommendations based on our review.

1. General Comment #1: Since the time of the last FYR Report, the memorandums and technical documents written by the US EPA and others have identified carbonless copy paper (CCP) and other types of paper products as potential sources of per- and polyfluoroalkyl substances (PFAS) and PFAS has been identified in various media at several Operable Units (OUs) (e.g., OU-1, OU-2, OU-3, and OU-5). However, the nature and extent of PFAS at the site has not been widely investigated and a few OUs (e.g., OU-4 and OU-7) have not been sampled for PFAS.

   EGLE recommends the following based on the current level of knowledge of PFAS at the site and regulatory framework.

   - For OUs where remedies are currently installed and routine operations, monitoring, and maintenance activities are ongoing, monitoring for PFAS should be included to help evaluate if groundwater with PFAS contamination above applicable clean-up levels is present and potentially migrating off-site.

   - For OUs where investigations are ongoing or remedies are under construction, PFAS should be considered as a potential constituent of concern and added as an analyte to future investigations or monitoring plans.

2. General Comment #2: Text in the subject FYR Report includes mention of ongoing recovery as part of select remedies for OU-5 and the requirement for the collection of long-term monitoring (LTM) data to augment the existing LTM baseline dataset, but the existing baseline LTM dataset and trends that would be needed to show if, where, and at what rate recovery is occurring are not summarized in the report. The FYR Report would benefit from the addition of such discussions and trend analyses as they provide meaningful information on the current condition, ongoing recovery, and the effectiveness of removal actions.

3. General Comment #3: This FYR Reports and future FYR Reports should evaluate the protectiveness of removal actions when those actions have been selected as final remedial actions in a Record of Decision (ROD) or in locations where removal actions were completed but it has been determined that no additional remedial action will be needed following completion of post-ROD sampling, even if the entire remedy has not been fully constructed. A few examples of where this is relevant are offered below.

    - A removal action was completed in Area 1 in Portage Creek from 2009 to 2011. The Area 1 ROD was signed in 2016. The selected sediment remedy in the Area 1 ROD anticipates no additional remedial action for Portage Creek but requires ongoing monitoring, maintenance, and sampling to document declines in media and evaluate progress toward achieving remedial goals and objectives.

    - In Area 1, a removal action was completed in the former Plainwell Impoundment in 2009 and a removal action was completed in the vicinity of Plainwell Dam No. 2010. The Area 1 ROD was signed in 2016. Following completion of the Area 1 remedial design pre-design investigation, no additional remedial action is planned for any river Sections outside of the Remedial Reach, including Section 6 and Section 8, where the Plainwell Dam No. 2 and Plainwell Dam removal actions were completed.

    - A removal action was completed in the former Otsego Township impoundment within Area 3 in 2018. A ROD was signed for Area 3 in May 2022. The selected sediment remedy in the Area 3 ROD includes no additional remedial action for the removal footprint.

4. Section II, Selected Remedy for Area 1, Page 29: The text states, “The table below summarizes the various FRGs for Area 1. The ability to meet the various risk-based fish tissue FRGs will be evaluated during the FYR process following the Area 1 remedial action. These reviews will consider factors identified during LTM that may limit overall fish tissue and sediment recovery (e.g., fish tissue or sediment concentrations approaching background levels, which include atmospheric deposition and/or other non-Site sources of PCBs to the river system).”

Background levels that are used to develop cleanup levels and establish remedial goals in various media may fluctuate over time, so contemporaneous data (e.g., sediment and fish tissue samples) from the Site and reference areas are needed to develop comparisons to support the FYR process.

Please edit the text to state, “The table below summarizes the various FRGs for Area 1. The ability to meet the various risk-based fish tissue FRGs will be evaluated during the FYR process following the Area 1 remedial action. These reviews will consider factors identified during LTM that may limit overall fish tissue and sediment recovery (e.g., fish tissue or sediment concentrations approaching contemporaneous background levels, which include atmospheric deposition and/or other non-Site sources of PCBs to the river system).”

5. Section II, Status of the Area 1 Remedy, Page 36: The total tonnages and volumes are slightly different than the tonnages and volumes in Table 5-3 and Table 5-4 of the CVSC Construction Completion Report (inserted below). If updated totals have been provided, then no changes to the text would be necessary. If totals have not been updated, then the text should be edited to match totals presented in the CVSC Construction Completion Report.

   Currently, the text states “The RA for the Crown Vantage Side Channel (CVSC) began in October 2020 and was completed in the April 2021. The CVSC is a 1/4-mile backwater area adjacent and connected to the Kalamazoo River. The RA included dredging PCB-contaminated sediments, placement of a residual sand cover, and restoring the banks of the channel. 11,244 cubic yards of contaminated sediment was removed and 425 truck loads of material (19,511 tons) were shipped for disposal at commercial landfills.”

   Additionally, the discussion regarding the CVSC remedial action should be lengthened to describe elements of the remedial action and final construction in greater detail, including results of the post dredge confirmation sampling and summaries of findings from ongoing monitoring and maintenance activities that have been completed since the remedy was constructed. Generally, this discussion should focus on the undredged inventory that remains in-place following completion of the remedial action and stability of the river channel and banks following restoration. The permanence and ability of the backfill to physically separate and chemically isolate PCBs along with the stability of the “berm” that separates the upstream end of the CVSC from the mainstem of the Kalamazoo River are critical to the short- and long-term success of the remedy. To help facilitate these edits, EGLE has included copies of the CVSC Confirmation Results Tracking table EGLE’s comments on the CVSC Backfill Work Plan is included as an attachment.

   In addition to adding text, EGLE recommends the text currently in the document be changed to, “The RA for the Crown Vantage Side Channel (CVSC) began in October 2020 and was completed in the April 2021. The CVSC is a 1/4 -mile backwater area adjacent and connected to the Kalamazoo River.

The RA included dredging PCB-contaminated sediments, placement of a sand backfill layer, and restoring the banks of the channel. 11,199 cubic yards of contaminated sediment was removed and 425 truck loads of material (20,628 tons) were shipped for disposal at commercial landfills."

Continued monitoring is needed to evaluate the functionality and protectiveness of the sediment remedy installed at the CVSC, including but not limited to bathymetric and topographic surveys.

6. Section VI, Issues/Recommendations, Page 54: EGLE recommends that PCB congener-based analytical methods be used in lieu of or in addition to Aroclor methods that are still being utilized at multiple OUs to measure total PCBs in variety of matrices. EGLE offers the following lines of evidence and support for why this recommendation should be supported.

    - Risks at all OUs are based on risks to total PCBs, not individual Aroclors or congeners. And, EGLE Part 201 criteria are based on total PCBs, not individual Aroclors or congeners.

    - The potential for inaccurate and imprecise total PCB measurements when using the Aroclor method and summing individual Aroclors to approximate a total PCB concentration is something that is accepted by the broader scientific community. And issues with accurate and precise total PCB quantitation have been observed in soil and sediment samples collected from OU-5 and analyzed by contract laboratories for EGLE, the US EPA, and the Responsible Parties.

    - Congener-based analytical methods allow for substantially lower detection limits, accurate quantitation of PCBs, and are widely utilized at other Superfund sites in the Region and across the country.

    - Detection limits for individual Aroclors are generally much higher than detection limits for individual PCB congeners and in some cases (i.e., wastewater treatment sampling), the Aroclor analytical method being used cannot achieve detection limits low enough to demonstrate compliance with EGLE's risk-based criteria.

    - Rarely but recently, groundwater and leachate samples from a few of the land-based OUs that were analyzed using the Aroclor method have had detectable concentrations of PCBs, but the majority of results for water samples are simply reported as "non-detect".

7. Section VI, Issues/Recommendations, Page 54: For OU-5, refinement and continued evaluation of Aroclor measurements in relevant media is needed to ensure that results are accurate over time and space, especially at concentrations that are at or near site-specific risk-based criteria or removal action levels.

Sample replicates analyzed after laboratory corrective actions were implemented suggest that total Aroclor measurements in sediments and soils from at least one laboratory are still biased low and may not be representative of the total PCB concentration in the material. A low bias in results being reported by laboratories may negatively impact the protectiveness of remedies that have been installed or are being developed. For remedies developed or constructed using data collected prior to identification of the low analytical bias, follow-up actions (i.e., additional sampling) are needed to ensure that alternatives being scoped and future remedies that are installed are protective in the short- and long-term.

8. Section VI, Issues/Recommendations, Page 54: Remedies that have been constructed should begin examining potential vulnerabilities associated with climate change, and remedies that are being developed should be designed with climate resilience in mind.

EGLE appreciates the opportunity to review and comment on the subject FYR Report for the Site. If you have any questions, please contact Mr. Daniel Peabody, Environmental Quality Analyst, Remediation and Redevelopment Division at 517-285-3924; PeabodyD@Michigan.gov; or EGLE, P.O, Box 30426, Lansing, Michigan 48909-7926.

Sincerely,

Daniel Peabody
Environmental Quality Analyst
Superfund Section
Remediation and Redevelopment Division

Attachments
att/cc: Megen Miller, Michigan Department of Attorney General
Dr. Keegan Roberts, CDM Smith
Dr. Lisa Williams, U.S. Fish and Wildlife Service
Mark Mills, MDNR
David Kline, EGLE
John Riley, EGLE
Joseph Walczak, EGLE